WHAT IS CLAIMED IS:

1. A method for generating an oscillating signal according to a control current, comprising:

receiving a control current corresponding to an oscillation frequency;

generating one or more first differential signals and one or more second differential signals by performing the following for each stage of one or more stages:

switching a first load according to the control current to yield the first differential signal, the first load comprising at least a first set of transistors; and

switching a second load according to the control current to yield the second differential signal, the second load comprising at least a second set of transistors coupled to the first set of transistors, the first set of transistors operating in opposition to the second set of transistors; and

generating an oscillating signal in accordance with the one or more first differential signals and the one or more second differential signals, the oscillating signal having a frequency substantially proportional to the oscillation frequency.

2. The method of Claim 1, further comprising:

receiving a control voltage, the control voltage corresponding to the oscillation frequency; and

generating the control current according to the control voltage.

3. The method of Claim 1, further comprising:

receiving input corresponding to the oscillation frequency; and

generating the control current according to the input by:

receiving an integral current comprising an integral of the control current;

receiving a proportional current proportional to a frequency error associated with the oscillation frequency; and

summing the integral current and the proportional current to yield the control current.

4. The method of Claim 1, wherein switching the first load according to the control current to yield the first differential signal further comprises introducing a delay according to the control current.

5. The method of Claim 1, wherein generating the oscillating signal in accordance with the one or more first differential signals and the one or more second differential signals further comprises transforming a waveform of a first differential signal of a stage to a square waveform having an approximately fifty percent duty cycle.

6. The method of Claim 1, wherein generating the oscillating signal in accordance with the one or more first differential signals and the one or more second differential signals further comprises transforming a waveform of a first differential signal of a stage to a square waveform by:

identifying a plurality of slew points of the first differential signal, a slew point comprising an intersection between the first differential signal and a second differential signal of the stage; and

increasing a slope at each slew point of the first differential signal.

7. The method of Claim 1, wherein:

the first differential signal has a substantially square waveform with a fifty percent duty cycle; and

the second differential signal has a substantially square waveform with a fifty percent duty cycle.

8. A system for generating an oscillating signal according to a control current, comprising:

a delay module operable to:

receive a control current corresponding to an oscillation frequency;

generate one or more first differential signals and one or more second differential signals by performing the following for each stage of one or more stages:

switch a first load according to the control current to yield the first differential signal, the first load comprising at least a first set of transistors; and

switch a second load according to the control current to yield the second differential signal, the second load comprising at least a second set of transistors coupled to the first set of transistors, the first set of transistors operating in opposition to the second set of transistors; and

a slew rate adjuster coupled to the delay module and operable to generate an oscillating signal in accordance with the one or more first differential signals and the one or more second differential signals, the oscillating signal having a frequency substantially proportional to the oscillation frequency.

9. The system of Claim 8, further comprising a bias generator coupled to the delay module and operable to:

receive a control voltage, the control voltage corresponding to the oscillation frequency; and

generate the control current according to the control voltage.

10. The system of Claim 8, further comprising a bias generator coupled to the delay module and operable to:

receive input corresponding to the oscillation frequency; and

generate the control current according to the input by:

receiving an integral current comprising an integral of the control current;

receiving a proportional current proportional to a frequency error associated with the oscillation frequency; and

summing the integral current and the proportional current to yield the control current.

11. The system of Claim 8, wherein the delay module is operable to switch the first load according to the control current to yield the first differential signal by introducing a delay according to the control current.

12. The system of Claim 8, wherein the slew rate adjuster is operable to generate the oscillating signal in accordance with the one or more first differential signals and the one or more second differential signals by transforming a waveform of a first differential signal of a stage to a square waveform having an approximately fifty percent duty cycle.

13. The system of Claim 8, wherein the slew rate adjuster is operable to generate the oscillating signal in accordance with the one or more first differential signals and the one or more second differential signals by transforming a waveform of a first differential signal of a stage to a square waveform by:

identifying a plurality of slew points of the first differential signal, a slew point comprising an intersection between the first differential signal and a second differential signal of the stage; and

increasing a slope at each slew point of the first differential signal.

14. The system of Claim 8, wherein:

the first differential signal has a substantially square waveform with a fifty percent duty cycle; and

the second differential signal has a substantially square waveform with a fifty percent duty cycle.

15. A system for generating an oscillating signal according to a control current, comprising:

a delay module operable to:

receive a control current corresponding to an oscillation frequency;

generate one or more first differential signals and one or more second differential signals by performing the following for each stage of one or more stages:

switch a first load according to the control current to yield the first differential signal by introducing a delay according to the control current, the first load comprising at least a first set of transistors, the first differential signal having a substantially square waveform with a fifty percent duty cycle; and

switch a second load according to the control current to yield the second differential signal, the second load comprising at least a second set of transistors coupled to the first set of transistors, the first set of transistors operating in opposition to the second set of transistors, the second differential signal having a substantially square waveform with a fifty percent duty cycle; and

a slew rate adjuster coupled to the delay module and operable to generate an oscillating signal in accordance with the one or more first differential signals and the one or more second differential signals, the oscillating signal having a frequency substantially proportional to the oscillation frequency.

16. The system of Claim 15, further comprising a bias generator coupled to the delay module and operable to:

receive a control voltage, the control voltage corresponding to the oscillation frequency; and

generate the control current according to the control voltage.

17. The system of Claim 15, further comprising a bias generator coupled to the delay module and operable to:

receive input corresponding to the oscillation frequency; and

generate the control current according to the input by:

receiving an integral current comprising an integral of the control current;

receiving a proportional current proportional to a frequency error associated with the oscillation frequency; and

summing the integral current and the proportional current to yield the control current.

18. The system of Claim 15, wherein the slew rate adjuster is operable to generate the oscillating signal in accordance with the one or more first differential signals and the one or more second differential signals by transforming a waveform of a first differential signal of a stage to a square waveform by:

identifying a plurality of slew points of the first differential signal, a slew point comprising an intersection between the first differential signal and a second differential signal of the stage; and

increasing a slope at each slew point of the first differential signal.

19. A system for generating an oscillating signal according to a control current, comprising:

means for receiving a control current corresponding to an oscillation frequency;

means for generating one or more first differential signals and one or more second differential signals by performing the following for each stage of one or more stages:

switching a first load according to the control current to yield the first differential signal, the first load comprising at least a first set of transistors; and

switching a second load according to the control current to yield the second differential signal, the second load comprising at least a second set of transistors coupled to the first set of transistors, the first set of transistors operating in opposition to the second set of transistors; and

means for generating an oscillating signal in accordance with the one or more first differential signals and the one or more second differential signals, the oscillating signal having a frequency substantially proportional to the oscillation frequency.

20. A method for generating an oscillating signal according to a control current, comprising:

receiving input corresponding to an oscillation frequency;

generating a control current corresponding to the oscillation frequency by:

receiving an integral current comprising an integral of the control current;

receiving a proportional current proportional to a frequency error associated with the oscillation frequency; and

summing the integral current and the proportional current to yield the control current;

generating one or more first differential signals and one or more second differential signals by performing the following for each stage of one or more stages:

switching a first load according to the control current to yield the first differential signal by introducing a delay according to the control current, the first load comprising at least a first set of transistors, the first differential signal having a substantially square waveform with a fifty percent duty cycle; and

switching a second load according to the control current to yield the second differential signal, the second load comprising at least a second set of transistors coupled to the first set of transistors, the first set of transistors operating in opposition to the second set of transistors, the second differential signal having a substantially square waveform with a fifty percent duty cycle; and

generating an oscillating signal in accordance with the one or more first differential signals and the one or more second differential signals, the oscillating signal having a frequency substantially proportional to the oscillation frequency, the oscillating signal generated by transforming a waveform of a first differential signal of a stage to a square waveform having an approximately fifty percent duty cycle by:

identifying a plurality of slew points of the first differential signal, a slew point comprising an intersection between the first differential signal and a second differential signal of the stage; and

increasing a slope at each slew point of the first differential signal.